What is claimed is:

1. A shifting tool for use in a subterranean well comprising:

a housing;

an inner sleeve disposed within the housing;

an actuator piston disposed within a first chamber in the housing; and

a compensating piston disposed within a second chamber in the housing;

wherein the shifting tool can operate in a sealed volume without venting fluid within the sealed volume to the surface or into the well.

2. The shifting tool of claim 1 further comprising locking dogs.

3. The shifting tool of claim 1 further comprising a spring in the second chamber.

4. The shifting tool of claim 1 in which a compressible fluid resides in the second chamber.

5. The shifting tool of claim 1 in which the tool provides a fluid pathway between the first chamber and the second chamber.

6. The shifting tool of claim 1 in which the inner sleeve has a seal on its lower end to seal a port in the lower end of the housing.

7. The shifting tool of claim 1 further comprising a profile element to engage a complementary profile in a downhole tool.

8. The shifting tool of claim 1 in which the inner sleeve is releasably secured to the housing by a collet.

9. The shifting tool of claim 1 in which the actuator piston is releasably secured to the housing by a collet.

10. The shifting tool of claim 1 in which the tool provides a fluid pathway between the first chamber and a central passageway through the tool.

11. The shifting tool of claim 1 in which the tool can be retrieved by pulling the inner sleeve sufficiently upward.

12. The shifting tool of claim 1 in which the actuator piston can be moved up and down multiple times.

13. The shifting tool of claim 12 in which the actuator piston is cycled by applying and relieving fluid pressure to the actuator piston.

14. The shifting tool of claim 12 in which the actuator piston is cycled by pulling the inner sleeve upward, then returning the inner sleeve to close a port on the lower end of the housing, and applying pressure to drive the actuator piston downward.

15. The shifting tool of claim 12 further comprising a spring in the first chamber.

16. A shifting tool for use in a subterranean well comprising:

a housing;

an inner sleeve disposed within the housing;

an actuator piston disposed within a first chamber in the housing;

a compensating piston disposed within a second chamber in the housing;

locking dogs that releasably secure the housing to a downhole tool;

locating dogs that releasably engage the downhole tool to properly position the shifting tool;

a spring in the second chamber;

a fluid pathway between the first chamber and the second chamber; and

wherein the shifting tool can operate in a sealed volume within the downhole tool without venting fluid within the sealed volume to the surface or into the well.

17. The shifting tool of claim 16 further comprising a compressible fluid in the second chamber.

18. A method to shift a downhole tool element comprising:

running a shifting tool through a tubing to its proper position in the downhole tool;

locking the shifting tool in place;

pressurizing fluid in the tubing to exert a force on and move an actuator piston in the shifting tool;

receiving the fluid displaced by the actuator piston in a chamber within the shifting tool; and

moving the tool element in response to the movement of the actuator piston.

19. The method of claim 18 in which the pressurizing, receiving fluid, and moving steps are repeated multiple times.

20. The method of claim 18 further comprising pulling the inner sleeve upward to release the shifting tool for retrieval.